REMARKS:

General

By the above amendment the Applicant has provided some written explanations that more clearly describe the nature of the invention, and more clearly show its inventive nature with respect to prior art. The amendment does not add new matter to the specification, because it only more explicitly describes what was graphically shown in the patent application.

Analysis of the Office Action dated on 11/06/2009

First of all, the Applicant would like to thank the Examiner for clearly explaining that even though a reference might belong to a different field, it can still be anticipatory if it discloses every limitation recited in the claims.

The Applicant therefore understands that his remark, regarding the Li patent (Li et al, US 5,911,138) in the second paragraph in page 13 in Amendment B was incorrect.

Nevertheless, the Applicant believes that the remaining remarks in Amendment B regarding the Li patent are valid, as will be discussed in a later section of this document.

The Applicant also accepts the Examiner objection to Amendment B's claim 1 regarding the Banning patent (Banning et al, US 5,471,613). A tree design is seen in Banning (col. 3 lines 13-33 and Figure 2) as pointed out by the Examiner in which the same fragment of the expression appears in different nodes.

However, the Applicant considers that the present invention teaches away from Banning, and also considers that correcting the wording of the claim will be enough to correct this objection, as will be shown later.

Next, a detailed analysis of some parts of the Office Action will be performed.

Analysis of objection in page 4 of the office action (directed to claim 43)

The Applicant accepts this objection and withdraws claim 43.

Analysis of objection in pages 5-7 of the office action (directed to claim 1, claim 19 and related claims)

The Office Action objects this claim citing both the Li patent and the Banning patent as prior art.

The impact of the Li patent will be analyzed first.

As a terminological note, the Li patent refers to "query statements". The present invention refers to "calculation expressions" which, as indicated in the application description, could be logic or arithmetic. Logic calculation expressions are typically used as search string to build the "Where" part of a query statement. Therefore, the Li patent's "statements" are not the same thing as this invention's "expressions", despite they are closely related.

Two parts of Amendment's B claim 1 are important in analyzing this objectin:

1. "wherein (a) an arboreal graphical representation is an entity that shows a calculation expression in the form of a tree"

2. "and (b) at least one fragment of said calculation expression is shown in two different nodes of said tree"

With respect to part 1 above, even if "statements" and "expressions" were the same thing, the Li patent does not show any statement in the form of a tree. Actually, it shows a tree which contains whole statements.

For example, in the Abstract it says "... the query statements and their results are graphically presented as a tree, wherein the query statements and query results are nodes, and each query statement result is a child of the query statement which was run to create it"

This means that the nodes of the tree used in the Li invention are whole statements, and that the internal fragments / parts of the expressions are not laid out in the form of a tree.

However, in the present invention, it is in fact the the internal fragments / parts of the expression that are laid out in the form on the tree.

Part 2 above makes this point clearer, because it says that one fragment is shown in at least two nodes of the tree. In the Li patent, no fragment of any statement is shown in two nodes, because no expression (or statement) is divided. They are shown in whole.

In addition to the foregoing paragraphs, Amendment B also laid out some arguments as to why the Li patent does not teach away from the current patent.

However, the Applicant understands that the current wording of claim 1 might be not sufficiently clear, and will modify claim 1 in the present Amendment.

Regarding the Examiner's objection regarding the Banning patent, as mentioned above the Applicant accepts that objection. Claim 1 (and related claims) are reworded as shown in the new claim set to correct this objection accordingly.

Analysis of objection in page 8 of the office action (directed to claim 6).

The Applicant believes that the Li's patent is not referring to an escalator structure as disclosed in the present application and show in Figure 11 in the application of the present invention.

Evidence for this comes from the fact that the Li patent shows full statements, and it does not enter into the internal structure of any statement. In contrast, the present application, and the escalator structure in particular, lay out the internal structure of expressions / statements.

However, the Applicant acknowledges that it might be the case that claim 6 is not well worded to describe the escalator structure as depicted in Figure 11 in the patent application. A new version of the claim is provided.

Analysis of objection in page 9 of the office action directed to claim 10.

The Applicant believes that the Li patent does not disclose a feature similar to this one. Evidence for this is the fact that and this claim is directed to a specific manner of utilizing operators, and the Li patent does not make use of operators. Therefore, the Li patent cannot disclose a feature similar to this one.

Analysis of objection in page 9 of the office action directed to claim 11.

As in the previous case, the Applicant believes that the Li patent does not disclose a feature similar to this one. The reasoning is the same as above, Li patent does not make use of operators, but this claim is directed to a specific manner of utilizing operators.

Analysis of the remaining objections

The Applicant considers that the other objected claims will become valid as dependent claims on claim 1 when claim 1 is accepted.

Description of Current Actual Amendments to the Claims

Four claims have been amended, as described below:

Amendment to Claim 1 and Claim 19

(This amendment is replicated in method version Claim 19)

The amendments performered are the following:

1. Adding this paragraph: "in such a way that at least two different fragments of said expression are shown respectively in two different nodes of said tree"

This paragraph means that if A and B are different fragments of the expression, they must be shown each one in a different node of the tree. Two fragments are different even if one includes the other, as long as the first one contains additional fragments.

This paragraph helps to clarify that the invention teaches away from the Li patent by clarifying the fact that the internal parts of the expression are laid out in different parts of a tree, rather than different whole expressions (or statements) occupying nodes of a tree.

The Li patent does not describe a expression (or statement, in their terminology) being fragmented, and at least two of its fragments being assigned to different nodes of the tree.

2. Adding this paragraph: "wherein one of those two different nodes is an ancestor node to the other node, and said ancestor node contains the fragment of the descendent node plus additional fragments of said calculation expression,"

Figure 4 helps to illustrate this paragraph. The fragment shown in node 402 is "Language=Russian", and this fragment is also shown in node 4001: "Language= Russian AND Year > 2002".

This paragraph shows how the invention teaches away from both the Li patent and the Banning patent.

Regarding the Li patent: As was mentioned above, the Li patent does not disclose fragmenting an expression and distributing the fragments in different nodes. So it does not disclose either distributing the fragments in a way that one node contains a descendent node.

Regarding the Banning patent: This paragraph makes it clear that the invention teaches away from what is described in the Banning patent in col.3, lines 13-33. Banning described the fact that, in the prior art, it was customary to replicate nodes in order to use binary operators. These nodes were occupying the same level in the expression, as leaf nodes in the tree.

However, in the current invention, a fragment of the expression is shown in different nodes, but in a hierarchical way, one of the nodes being an ancestor to the other one. Therefore, the ancestor node will contain the fragment of the descendent node, but will also contain other fragments of the expression. That is to say, the same fragment of the expression is shown to the user in nodes of the tree which are found while transversing the tree from the leaf nodes up to the root nodes. This aspect is one of the reasons why the invention is so useful to the user.

3. Adding this paragraph: "at least one node shows only an introduced subexpression, wherein an introduced subexpression is a subexpression which is introduced by an operator, wherein said operator indicates how the content of the node is to be compounded with other nodes in the tree to yield the whole expression or another subexpression of higher order."

A subexpression that is introduced by an operator is a subexpression which is linked to the rest of the tree by an operator. For example, in Figure 4, node 4003 is introduced by node 4004.

The word "only" in the paragraph excludes cases such as those found in the Li patent, in which a node contains a whole statement, including also internal operators in the statement. In the Li patent, there is no node of the tree that is linked to the rest of the tree by an operator.

It could be though that the term "select" in statements in the Li patent could be one of thoses operators that introduce the expression in the node. However, the paragraph says that the operator "indicates how the content of the node is to be compounded with other nodes in the tree to yield the whole expression or another subexpression of higher order". Compounding is defined in the Specification, page 8, lines 27-35.

The paragraph added to the specification indicates that each node links to the tree and contributes its content to build up the final expression with other nodes of the tree.

In summary, this paragraph teaches away from the Li patent, because the trees in the Li node are not introduced by operators that link the node to the rest of the tree. The tree in the Li patent is a tool to present queries in an organized way, and not to build an expression upon linking of elements of lower order.

The amendment just discussed also shows the inventive nature of the current patent application over Coden et al (US Patent 6,263,328). The Coden patent is not included as prior art, but the Applicant would like to analyze it in this Amendment because he considers that is related to the present invention.

The Coden patent also refers to a system for building queries, and shares some similarities with the Banning patent and with the present invention. In the tree cases, a process is run on the tree to build a query after its nodes. This process is called compounding in the present invention and in the Coden invention. It is refered generically as "deriving" in the Banning patent (claim 1,Banning, for example). Despite the process receives the same name in the present invention and in the Coden patent, it works in a different way in both cases.

The way compounding works in the three approaches is obvious to one of ordinary knowledge in the field. The introducing operator, for example an OR, AND, * and so on, indicate that this logical/mathematical operation must be applied to link the content of the node with a given content derived from other nodes of the tree.

The critical aspect is how the three approaches distribute the expression in the tree. Both Banning and Coden only show atomic fragments in the nodes of the tree. In contrast, the present invention at least shows two fragments in such a way that one of them contains the other. This is not disclosed either in the Coden patent nor in the Banning patent.

Amendment to Claim 6

As was mentioned before, this claim has been reworded to help clarify its differences with prior art.

Amendment to Claim 43

This claim has been deleted, as was mentioned before, to comply with objection in page 4 of the Office Action.

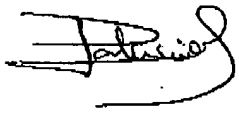
CONCLUSION

For all the above reasons, Applicant submit that the specification and claims are now in proper form, and that the claims define all define patentably over the prior art. Therefore they submit that this application is now in condition for allowance, which action they respectfully solicit.

Conditional Request for Constructive Assistance

Applicant has amended the specification of this application so that they are proper, definite and define novel structure which is also unobvious. If, for any reason this application is not believed to be in full condition for allowance, applicant respectfully request the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. §2173.02 and §707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully



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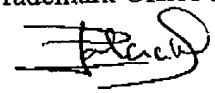

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